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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/512,032	02/24/2000	Akira Egawa	35.C14311	5722
5514	7590	08/25/2005	EXAMINER	
FITZPATRICK CELLA HARPER & SCINTO 30 ROCKEFELLER PLAZA NEW YORK, NY 10112			YODER III, CHRISS S	
			ART UNIT	PAPER NUMBER

2612

DATE MAILED: 08/25/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)	
	09/512,032	EGAWA, AKIRA	
	Examiner	Art Unit	
	Chriss S. Yoder, III	2612	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 31 May 2005.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-3 and 5-9 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3 and 5-9 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 February 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

## **DETAILED ACTION**

### ***Response to Arguments***

Applicant's arguments filed 05/31/2005 have been fully considered but they are not persuasive.

Applicant argues, with respect to claims 1 and 8, that because Egawa specifies that element 96 is a linear transfer unit, and that the linear CCD 96 "is connected to a ring CCD (not shown)", that the linear CCD 96 in Egawa cannot be deemed to disclose applicant's claimed ring-shaped second transfer unit. However, the examiner points out that the combination of the linear CCD 96 and the connected ring CCD has been interpreted to be the "ring-shaped second transfer unit" as claimed. For example, as seen in figure 10, that the linear CCD 217 and ring CCD 218 are one continuous transfer unit.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1. Claims 1-9 are rejected under 35 U.S.C. 102(b) as being anticipated by Egawa et al. (US Patent # 5,808,726).
2. In regard to claim 1, note Egawa discloses the use of a sensor array for receiving reflected light (figure 6: 91), a first transfer unit arranged to transfer signals from the (figure 6: 94), a second ring-shaped transfer unit arranged to integrate the signal from

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the first transfer means (column 4, line 13-15; and figure 6: 96), the first transfer unit sequentially transfers signals from the sensor array in light projection ON and OFF states to the ring-shaped second transfer unit at different timings respectively (figure 7; each pulse of SH transfers the charge from the first to the second transfer unit; i.e. the first OFF signal is transferred from transfer unit, 94, to second transfer unit, 96, during the first pulse in SH, and the ON signal is transferred from transfer unit, 94, to second transfer unit, 96, during the second pulse in SH), and wherein a transfer frequency of the ring-shaped second transfer means is higher than that of the first transfer means (figure 7, SH has a higher frequency than ST).

3. In regard to claim 2, note Egawa discloses that each timing of the first transfer unit has a phase different from that of the second transfer means (figure 7, SH has a different phase than ST).

4. In regard to claim 3, note Egawa discloses that the second transfer unit comprises a skimming unit arranged to determine skimming on the basis of the second signal and a pixel for which skimming is determined skimming by a combination of light projection ON and OFF states (column 3, lines 29-36).

5. In regard to claim 5, note Egawa discloses that integration starts from the first signal (column 3, lines 19-25; figure 7: CK1, the integration is driven by the clock pulses in the ring shaped transfer unit and starts from the first signal).

6. In regard to claim 6, note Egawa discloses that the light projection repeatedly alternates the ON and OFF states (figure 7: IRED).

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7. In regard to claim 7, note Egawa discloses that skimming is inhibited when a light projection OFF signal goes ahead of a light projection ON signal in integration of the signal in the second transfer unit (column 3, lines 20-36).

8. In regard to claim 8, note Egawa discloses the use of a light projection unit arranged to project light to an object (figure 9: 415), a plurality of sensor arrays for receiving reflected light (column 6, lines 35-39; and figure 9: 410 and 411), a plurality of first transfer units arranged to transfer signals from said plurality of sensor arrays (figure 6: 91 and 94; the signals from the sensor array, 91, are transferred to the first transfer units, 94), a plurality of ring-shaped second transfer units arranged to integrate the signals from the plurality of first transfer units (figure 6: 94 and 96; the signals from the first transfer units, 96, are transferred to the second transfer units, 96), the first transfer unit sequentially transfers signals from the sensor array in light projection ON and OFF states to said respective ring-shaped second transfer unit at different timings respectively (figure 7; each pulse of SH transfers the charge from the first to the second transfer unit; i.e. the first OFF signal is transferred from transfer unit, 94, to second transfer unit, 96, during the first pulse in SH, and the ON signal is transferred from transfer unit, 94, to second transfer unit, 96, during the second pulse in SH), wherein a transfer frequency of the second transfer unit is higher than that of the first transfer unit (figure 7, SH has a higher frequency than ST), and a distance measuring unit arranged to measure a distance using a difference signal between the first signal and the second signal from the second transfer unit (column 6, line 65 –column 7, line 2).

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9. In regard to claim 9, note Egawa discloses that each timing of the first transfer unit has a phase different from that of the second transfer means (figure 7, SH has a different phase than ST).

### ***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chriss S. Yoder, III whose telephone number is (571) 272-7323. The examiner can normally be reached on M-F: 8 - 4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wendy Garber can be reached on (571) 272-7308. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

CSY  
August 11, 2005



THAI TRAN  
PRIMARY EXAMINER